"To promote understanding and appreciation of the religious and spiritual values which abide in the processes and relationships of agriculture and rural life; to define their significance and relate them to the Christian enterprise at home and abroad."

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REV. J. A. McDONALD — THE SOIL BUILDER[1]

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By Angus McDonald

Our farm[2] was one of the poorest and hilliest in eastern Oklahoma. The old man[3] called it his rock and air farm. The old man was a fanatic. He was a fanatic on soil conservation. He was always telling his neighbors how they should plow their crops and they were always laughing at him. They laughed at him because he was a preacher and he was telling them how to farm. He had queer ideas about the way to plow in dry weather, about hillside plowing, about building dams in the gullies and draws, and about conserving the soil in other ways.

The old man was a fanatic about the land. He was always talking about Jefferson and his great agrarian philosophy of government and about Jefferson as conservationist. "The soil," the old man said, "is the backbone of the Nation. If the soil washes away, the country will go to rack and ruin." The old man built dams all over his washy hillsides. One of the neighbors said, "The old man is the damnedest dam builder in the damn country."

I remember the old man built his dams very carefully. He would instruct the hired man how to place the rocks, and then, after the dam was built, tear it out and build it over to suit himself. He would put a rock in place, "hist" his foot on the wagon hub and give us a lecture on the soil. "When the soil is gone, the country will go to rack and ruin." Then he talked some about Jefferson and then some about Scotch contour plowing. But nobody listened. What was the use, when we had heard it so many times.

His Method "You must always make a solid wall of rock across the gully," the old man said. "Fit the rock together and use the big ones first. Then back of the wall put the small rocks up the hill as an approach. For a small gully a two-foot approach is enough. The little rocks should be filled in until they are almost level with the top of the rock wall. Then heavy gravel or fine rock should be spread over the approach as a finishing coat." We often tried to slight our work and throw the rocks in any way. But he would see us and make us do it over again. Will said that the old man watched us out of the corner of his eyes so much he was going blind.

The old man used a peculiar kind of hillside turning plow which he had invented or gotten somewhere. I have never seen one like it. There was a bolt and slide which turned the blade so that in turning land he could come back in the same furrow without going up and down the hill.

Aerating The Soil Frequently when breaking land the old man used what he called a subsoiler. He ran this in the furrow behind the turning plow. A long keen bull tongue was attached to a Georgia stock. He said that this let the air get down into the soil better.

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1. Reprinted with permission from SOIL CONSERVATION, September 1936.
2. Located near Sallisaw in Sequoyah County, Oklahoma.
3. The "old man" was Dr. J. A. McDonald, a Presbyterian minister. He was born in 1850 in Alabama, reared near Tupelo, Miss., educated at Coopers Institute, Miss., and at Lebanon, Tenn. He was not a professional farmer, never farmed except when he lived on the farm referred to here (1912-1922). As he read widely he probably picked up his ideas in various places, but some had been practiced in the family for generations.

"Cotton," the old man said, "has ruined the South. It has impoverished both the land and the farmer. I am proud," he said, "that I have never raised a stalk of cotton." The old man believed in raising lots of feed crops, particularly legumes and keeping plenty of stock to enrich the land with their manure. He said that the farmer who bought his feed was a disgrace to civilization. The farmer should raise everything he eats except sugar and coffee. All the farmers around let the ground near the fences and in the corners go to waste. He used every square foot of his land. He said that the richest soil was next to the fence because it had never been abused by agricultural butchers.

To begin with, our farm was one of the poorest and hilliest in the country. "You can't raise corn on that land," the neighbors said. "Maybe not the first year but you wait. I'll build it up." "What do you mean, build it up? That land is 'pore' and thin," the neighbors said. Well, the old man went on building his dams and after two or three years, the neighbors admitted his crops were better than theirs.

Soil Feeders — On the very thin land that had much slope he set out Bermuda grass. On all the cultivated land he planted cowpeas, peanuts, and other crops that he said would enrich the soil. He never laid by his corn without sowing cowpeas unless he already had them in rows between the corn. About the next to the last cultivation sometimes he would put a row of peas in the middle. On especially thin land I've seen him plant alternate rows of peas when he planted corn. The corn rows would be eight or nine feet apart and have one or two rows of peas between. He rotated his crops a great deal. His land never had corn on it more than once in three years. He had it all figured out that he would put more into the soil than he took out. He was the only farmer around that got two crops a year off his land. We sowed oats in February, harvested in June, and the old man, no matter how dry it was, would always break the ground as soon as the stock had cleaned up the waste grain. Then he would plant cowpeas or some other leguminous crop. He was always cultivating in dry weather. He said that it helped to hold the moisture and the ground would soak up more and there wouldn't be so much run-off if the ground were broken. The old man claimed the reason he made such good yields of corn was because he plowed it every eight days in dry weather. All the old farmers waited for a rain before they plowed. They laid by their corn when it was about waist high, but I've seen him cultivate his twice after it was in silk and tassel. The other farmers laid by their corn with solid sweeps that cut the roots but he began using buzzard and open sweeps after it was up any height at all. The big buzzard sweeps, that he used on a double shovel stock to lay by with, hardly stirred the ground over half an inch deep.

His Theory — He had a theory about conserving the moisture which took him about an hour to explain. I remember that I used to talk to Will when he got started on it but the old man was deaf and never paid any attention. He said that the capillary continuity must be broken to keep the soil from drying out.

There were only twenty acres in the old man's original farm. I remember he had rock walls nearly all around his land. These weren't gully dams; they were just walls around the fences. I remember one side of his farm was about three feet higher than the land next to it. The old man used to stand by the wall and look down upon the adjacent ten acres. There was a big gully that seemed to start from nowhere just below our land. There weren't any gullies on our side at all. Just two long slopes that ran together and formed a draw in between. About every one hundred feet up the draw there was a rock dam. The silt and sand had filled in above the dams until it was six or eight inches higher than below.

The old man used to stand and look at that big gully below our land. He always seemed to get angry when he looked at it. The gully was five feet deep in some places, I guess. It ran about fifty yards from the edge of the ten-acre field. The land between the gully and the fence had grown up with sassafras, red oak, and hickory bushes, and there were some blackberry thickets in some places. The rest of the land was in cultivation and was streaked with a few little gullies but most of it was nearly flat and the soil was reddish yellow. The old man said it was an example of what sheet wash would do. It finally got so the old man would wander over to that side of the field and look at the gully and the washed land more and more. One day he climbed over the fence and stomped up and down between the rows of stunted cotton and began talking to himself. I heard him mutter something about the foundations of civilization being undermined. I thought probably he was getting up one of his sermons.

Reclamation Begins — It was not long after this that the old man bought this adjacent ten acres. One of the neighbors told me that he had given two prices for it. I have never seen anybody work so hard as the old man did that year. He had the bushes all cleared off the new land in no time. Then he started to work on the gully. Will told me he was going to quit. He said he wasn't going to kill himself for no dollar a day. We hauled rocks by the wagon-load and built great walls of rock across the gully. Then the old man filled in behind with brush, blackberry-vine stems and little rocks. Behind the initial wall he laid heavy tow sacks. I had never seen him take so much care. Along by the fence he had a ditch dug to take care of the surplus water.

Right after the dams were completed a big rain came and the water tore holes in the dams in several places. But the old man was out early the next morning and put all the rocks back in place and strengthened the weak places.

He planted the poor part of the field in cowpeas, had us pick the peas when they were mature and then turned the vines under. In three years' time you wouldn't have known it was the same ten acres. The gully was nearly filled up and we were plowing over it. All the rows of the forage crops were run on the contours of the slope and there was little or no wash even during big rains. The soil looked darker and every year the yields were larger than the preceding one.

The old man died in 1924. I went to the funeral service in a church in Fort Smith where once he had been the pastor. The minister told what a good man he was and how many souls he had saved. He didn't mention the soil he had saved.